

higher animals, invariably contains, during the latter periods of intra-uterine life, albuminous or nutritious matter, which undergoes digestion in the small intestines. He finds that the nature of this substance varies very much in different animals. In the earlier periods of foetal life, the stomach contains very little, if any, nutritious matter. He is disposed to consider the salivary glands as the source of the albuminous matter found in the stomach at later periods.

“Extracts of Letters from Captain Williams, first Assistant to the Commissioner of Arracan, and from Ensign Haukeu and Mr. Howe, Marine Assistant Commissioner, giving details of a curious phenomenon seen at sea off Ryook Phyoo.” Communicated by Viscount Mahon, F.R.S., Pres. S.A.

The appearance in question, seen between five and six o'clock in the evening of the 2nd of December 1845, was that of a large flame far out at sea, flickering several times for fifteen and twenty minutes, and suddenly ceasing. It was conjectured to have been either a large ship on fire, or a volcanic eruption; but no positive data exist for determining the question.

“On the Fossil Remains of the soft parts of Foraminifera discovered in the Chalk and Flint of the South-east of England.” By Gideon Algernon Mantell, Esq., LL.D., F.R.S.

By subjecting small portions of calcareous rock to the action of diluted hydrochloric acid, the calcareous earth and the shells it had enveloped were removed; the residue consisting of particles of quartz and of green silicate of iron; and also numerous remains of the soft parts of animalcules, chiefly *Xanthidia* and *Rotaliæ*. The organization of the latter appears, from the observations of Ehrenberg, to be very simple, and to have no relation with the *Cephalopoda*, as was formerly imagined. The body is enclosed within the shell, which is polythalamous, and it occupies not only the outer chamber, but also all the cells contemporaneously, and the shell is pierced all over with minute pores, through which tentacula protrude; and there are also several soft transparent feelers, or *pseudopodia*, which are instruments of locomotion. When the shell is removed by acid, the soft body is exposed, and is seen to extend to the innermost chamber; and there is a connecting tube occupying the place of the siphuncle of the nautilus, but which is the intestinal canal; for the cells are the receptacles of the digestive sacs or stomachs, in which monads, naviculæ, and other minute infusoria, which the animal had swallowed, may sometimes be observed. In the fossil remains, the appearance of the parts which the author supposes to be the digestive organs, is that of a series of bladders or sacs, composed of a tough flexible integument, and connected by a tube. These organs are more or less filled with a dark substance; those which are distended are always well-defined, while the empty ones are collapsed and disposed in folds, just as membranous pouches would appear under similar conditions. The sacs regularly diminish in

size from the outer to the innermost cell, and vary in number from fourteen to twenty-six. In some instances, small papillæ are observable on the external surface of the integument, which are probably vestiges of the bases of the pseudopodia or tentacula.

Drawings of the various specimens described by the author accompany the paper.

“Microscopic Observations on the so-called Vesicular Vapours of Water as existing in the Vapours of Steam, and in Clouds,” &c. By A. Waller, M.D. Communicated by P. M. Roget, M.D., Sec. R.S.

From some experiments, of which the author published an account in the Philosophical Magazine of last February, he was led to conclude that the opaque vapours of condensed steam consist of minute globules or spherules of water, and not of small vesicles, as is implied in the generally received theory, according to which this condition of water is designated by the term *vesicular vapour*. In the present paper, he relates a set of experiments confirming by microscopic observation his views of the globular condition of the particles of opaque vapours; premising a short retrospect of the opinions of Sir Isaac Newton, Halley, Kratzenstein, and De Saussure on this subject. Finding it impossible to observe the globules with any high magnifying power while they are at liberty to move, the author adopted the plan of fixing the condensed vapours arising from the breath or other sources, in some liquid, such as oil, which has no affinity with water. Of the many vehicles which he has tried, he finds Canada balsam to be that which is best adapted for these observations. By breathing with a little force on a slip of glass previously covered with a thin layer of balsam, the vapours of the breath are not only condensed on its surface, but penetrate beneath, where they may be recognised in opaque streaks of a white colour, and where they remain stationary for more than an hour; or, if covered with another thin piece of glass or talc, for a much longer period. These streaks are decomposed under the microscope into minute globules perfectly spherical, like shot, or the globules of mercury. The author describes, at some length, the various appearances presented under different circumstances, and with different oily fluids; and gives drawings of these appearances as exhibited by the microscope.

“Experiments relative to Animal Temperature, showing that there must be some source of animal heat besides the combustion of the Carbon and the Hydrogen contained in the Food of Animals.” By Robert Rigg, Esq., F.R.S.

The subject of these experiments was a labouring man in the employment of the author, living on his ordinary food, and working at his usual employment. A strict examination was instituted into the quantity and chemical constituents of the ingesta and egesta during ten days; at the end of which time he had gained one pound in weight. He infers from the results of this experiment, that the carbon and hydrogen contained in the food of animals, which enter